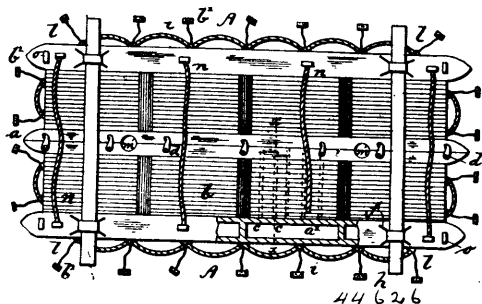


attached to said plates, and connecting them together against lateral displacement, substantially as set forth. 6th. The combination in an arched top furnace of the side walls provided with vertical plates or partitions 14, and the bearing bars 31 and 32, of the fire grates, secured to said plates by bolt and connection 33, substantially as set forth. 7th. The combination in an arch top furnace, of the side walls provided with vertical plates or partitions 14, and the dead plate 34, and bearing bars 31 and 32, of the fire grates secured to said plates by bolt and flange connection 33, substantially as set forth. 8th. The combination in an arched top basket grate furnace, of the fuel pockets 4, at the opposite side of the furnace, removable linings 35, arranged within the fuel pockets, to form air spaces 36, and provided with top flanges or rims 37, by which they are supported in place, substantially as set forth. 9th. The combination in an arched top basket grate furnace and its side fuel pockets 4, of the front wall 5, and metal front plate 6, formed with register openings 8, with the side walls 11, having an air space 19, and air passages or orifices 20, located immediately beneath the pockets, substantially as set forth. 10th. The combination in an arched top basket grate furnace, of the front wall 5, and metal front plate 6, forming the enclosed air space 39, and the doorway lining 38, arranged within the front wall 5, so as to form air space or passage 38', between the lining and the front wall the metal front plate 6, being provided with orifices 40, in line with the air space 38', substantially as set forth. 11th. In a steam boiler furnace or setting, the combination, of the boiler 44, with the supporting posts 48, arranged within an air space in the furnace walls, substantially as set forth. 12th. In a steam boiler furnace or setting the combination of the boiler 44, with a column or post 48, arranged within an air space 51, in the furnace walls, that has communication with the outer air and with the interior of the furnace, substantially as set forth. 13th. In a steam boiler furnace or setting, the combination of the boiler 44, and its supporting brackets 45, of the supporting track 47, bearing rollers 46, jack screws 49, and removable lining piece 50, substantially as set forth. 14th. In a steam boiler furnace or setting, the combination of the boiler 44, and horizontal partition 55, forming an air chamber beneath the fire bed of the furnace, the side and rear walls of the furnace, formed with air spaces 51, open at the top of the walls, and communicating with the air chamber 54, by passages 59, through the side and end walls, and the bridge walls 62, having an air passage 61, connecting said chamber with the fire bed, substantially as set forth.

No. 44,626. Life Raft. (*Radeau de sauvetage.*)



George B. Hussey, Providence, Rhode Island, U.S.A., 3rd November, 1893; 6 years.

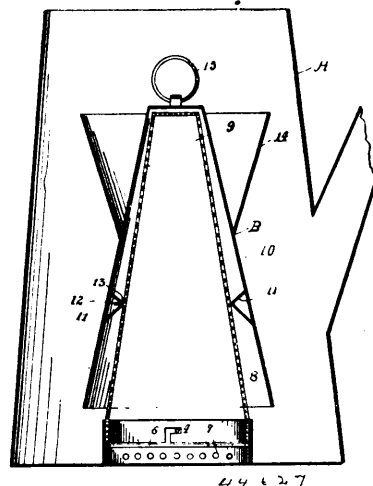
Claim.—1st. The combination with the longitudinally arranged buoyant hollow frame divided lengthwise and jointed together and further arranged to receive a sail carrying mast, of connected sections of buoyant material, as cork, secured to said frame, an elevated detachable seat extending across each end of the frame, and one or more series of suitably disposed life lines, substantially as described. 2nd. In a life raft provided with a hollow frame or body, and having connected sections of buoyant material, as cork, secured thereto, a series of looped life lines attached to the frame and a series of similarly attached smaller lines having an end of each provided with a piece of cork, substantially as and for the purpose specified. 3rd. The life raft A, hereinbefore described, consisting of the longitudinally divided and hinged hollow buoyant frame *a*, closely connected sections *b*, of cork secured to said frame, a suitably mounted sail arranged to be fixed at either end of the raft, detachable seats *h* extending across the frame, and one or more series of suitably disposed life lines. 4th. In a life raft provided with means for sailing the same, a hollow frame portion having a series of removable airtight boxes arranged therein, connected sections of buoyant material, as cork, secured to said frame and further provided with conveniently arranged life lines, substantially as set forth.

No. 44,627. Coffee Steeper. (*Appareil pour infuser le café.*)

George E. Overman, Rock Island, Illinois, U.S.A., 3rd November, 1893; 6 years.

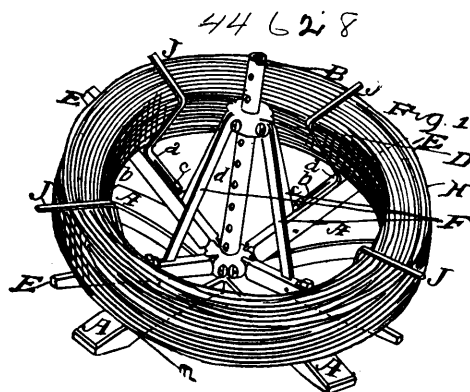
Claim.—1st. In a coffee steeper, the combination, with the hoop, having openings in its sides and a perforated bottom therein above the openings, of the perforated cone rising from the hoop and detachably connected thereto, the closed cone supported by and

around the perforated cone, and the outer cup or receptacle carried by the closed cone, as and for the purpose set forth. 2nd. In a coffee steeper, the combination, with the hoop, of the perforated cone rising from the hoop and detachably connected thereto, the closed cone supported by and around the perforated cone, and the outer cup or receptacle carried by the closed cone, as and for the purpose set forth. 3rd. In a coffee steeper, the combination, with



the hoop, having openings in its sides, and the perforated bottom therein above said openings, of the perforated cone rising from the hoop, a bayonet joint connection between them, the closed cone supported by and around the perforated cone, and the cup or receptacle carried by the closed cone, as and for the purpose set forth. 4th. In a coffee steeper, the combination, with the hoop, having a perforated bottom, of the perforated cone rising from the hoop and detachably connected thereto, the closed cone surrounding the perforated cone, stops within the closed cone resting against the perforated cone, a pin in the latter engaging a cross slot in one of the stops, and the cup carried by the closed cone, as and for the purpose set forth.

No. 44,628. Wire Reel. (*Dévidoir pour fils de fer.*)



John W. Buchanan, Smithville, Ohio, U.S.A., 3rd November, 1893; 6 years.

Claim.—The combination, with a suitable support, of a rotary spindle, a head C, mounted on said spindle near one of its end portions, arms E, pivotally secured to said head to vibrate transverse thereto, brackets J, secured to the arms E, to slide thereon, sliding head D, and links F, connecting the arms with the sliding head, substantially as described.

No. 44,629. Loom Shuttle. (*Navette de métier.*)

Stephen M. Hamblin, New Bedford, and Edwin S. Damon, Plymouth, all in Massachusetts, U.S.A., 4th November, 1893; 6 years.

Claim.—1st. A loom shuttle having a horizontal opening in the side of its head, in line with and connecting with the delivery eye thereof, adapted to have the thread from the bobbin passed there-through by the fingers of the operator, and having a horizontal threadway in line with the spindle connecting said opening, with an opening in the side of the spindle cavity, adapted to have the thread passed through it by the fingers of the operative, substantially as and for the purpose described. 2nd. A loom shuttle having a horizontal opening in the side of its head, in line with and con-